

**REMARKS**

This Preliminary Amendment constitutes the proper Submission with the Request for Continued Examination being concurrently filed and fully complies with M.P.E.P. § 706.07(h)(II).

Also, a Petition for Extension of Time is being concurrently filed with this Preliminary Amendment. Thus, this Amendment is being timely filed.

Applicant respectfully requests the Examiner to reconsider the present application in view of the foregoing amendments to the claims and the following comments.

***Status of the Claims***

Claims 1 and 28 have been amended. Claims 24 and 25 have been canceled herein. New claim 31 has been added. Thus, claims 1-23 and 26-31 are pending in the present application.

Support for the amendment to claim 1 is found at, e.g., page 25, line 29 to page 26, line 17 and page 92, lines 1-4. Further, the amendment to claim 28 has support in the specification at pages 93-95. Support for new claim 31 is found in the specification at least at the top of page 92 of the specification. Thus, no new matter has been added.

Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

***Issues Under 35 U.S.C. § 112, First Paragraph***

Claims 1-30 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement (see paragraphs 2-3 of the Office Action). Applicant respectfully traverses, and reconsideration and withdrawal of these rejections are respectfully requested.

**Claim 1**

The claims are directed to the photothermographic materials in which the image-forming SBR layer is substantially free of ammonium ion. In the Office Action, the Examiner explains that the present claim language means that ammonia is not intentionally added to each material or coating solution (see the sentence bridging pages 2-3 of the Office Action). Also, at page 3 of the Office Action, the Examiner states (emphasis in original):

*First, the section of the disclosure pointed out by the applicants fails to disclose [sic] the polymer latex is the main component of the image-forming layer, but "main binder in the layers formed on the imaging forming layer" . . .*

However, Applicant notes lines 31-34 on page 57 of the present specification (the Examiner also refers to this sentence of the specification):

*As the main binder in the layers formed on the image-forming layer side of the support, polymer latex is preferably used.*

(Applicant's emphasis added.) Thus, as pointed out by Applicant, the present specification explains that one of the layers formed on the image-forming layer side is the image-forming layer. Thus, Applicant respectfully submits that the original description discloses the polymer latex is the main component of the image forming layer.

As to the second reason by the Examiner for the rejection of pending claim 1, the term "ammonia" is replaced with the ion " $\text{NH}_4^+$ ." Thus, Applicant respectfully requests reconsideration in view of the Examiner's comments (see the Office Action at page 3, lines 3-8; see also page 4, lines 11-12 thereof).

As to the third reason by the Examiner for the rejection on the pending claim 1, the Examiner states at page 3, lines 8-10 of the Office Action:

*...the scope of the polymer latex containing substantially no  $\text{NH}_4^+$  encompasses beyond the scope of SBR exemplified therein.*

However, as can be seen from claim 1 as presented herein, the term "polymer latex" is replaced with "SBR latex." Also, the fact that SBR latex contains substantially no  $\text{NH}_4^+$  has been demonstrated by the previously filed Rule 132 Declaration signed March 4, 2004 by inventor Mr. Oikawa. Thus, it is believed that this reason stated by the Examiner has also been addressed.

Applicant respectfully submits that the rejection of claim 1 should be withdrawn.

#### Claim 28

As to the 35 U.S.C. § 112 rejection of pending claim 28, the Examiner states at the bottom of page 3 of the Office Action:

*The specification on pages 93-95 disclose [sic] the coating solution for the protective layer, the coating solution for the lower overcoat layer and the coating solution for the upper overcoat layer.*

In this regard, Applicant respectfully refers the Examiner to claim 28 as presented herein. The amended claim is in accordance with the Examiner's comments. Therefore, Applicant respectfully submits that the rejection of claim 28 should be withdrawn.

Claim 29

As to the 35 USC § 112 rejection of pending claim 29, at page 4 of the Office Action, the Examiner states:

*... The condition II is related to the layer formed on the image forming layer should not contain [sic] ammonia, not an image forming layer.*

However, at page 34, lines 8-11, the specification, in which is the same sentence pointed out by the Examiner, accurately states:

*. . . It is preferred that even a photothermographic material satisfying Condition[s] II should not substantially contain ammonia in the layers formed on the image-forming layer side of the support. . .*

(Applicant's emphasis added.) As mentioned above, it is explicitly set forth in the specification that one of the layers formed on the image-forming layer side is the image-forming layer. Thus, Applicant respectfully submits that the original written description adequately and fully discloses the limitation "wherein the image-forming layer is made of a coating solution comprising a pH modifier, wherein said coating solution contains substantially no  $\text{NH}_4^+$ ." One of skill in the art, upon reading the entire specification coupled with the information known in the art, would understand that the present inventor had possession of the instantly claimed invention.

Accordingly, this rejection under 35 U.S.C. § 112, first paragraph, has been overcome. Reconsideration and withdrawal of this rejection are respectfully requested.

***Issues Under 35 U.S.C. §§ 102/103***

Claims 1-16 and 18-30 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Japanese Patent No. 112072 (hereinafter

"JP '072") (see paragraphs 4-6 of the Office Action). Also, claim 17 stands rejected as stated in paragraph 7 of the Office Action. Applicant respectfully traverses, and reconsideration and withdrawal of these rejections are respectfully requested.

Applicant respectfully maintains the position that the instant claimed are patentable as stated in the previous reply of January 8, 2007. Also, Applicant respectfully requests reconsideration of the new set of claims as presented herein.

Applicant notes that a polymer latex, such as LACSTAR 3307B, is not soluble in a solvent of a coating liquid such as water. Further,  $\text{NH}_4^+$  within a polymer latex cannot be easily removed. In fact, if a pH modifier is added to a coating liquid containing LACSTAR 3307B in an attempt to remove the  $\text{NH}_4^+$  in the solvent, the  $\text{NH}_4^+$  within the polymer latex is still not removed. Such removal may require a further, specific step or process, such as soaking the polymer latex in an appropriate solvent for a long period of time. Thus, Applicant respectfully notes that  $\text{NH}_4^+$  remains in an image-forming layer so long as LACSTAR 3307B is used as a binder of the layer. This is a problem associated with the cited reference. Accordingly, Applicant respectfully maintains that none of the references cited by the Examiner (JP '072 and Ito '310) suggest or disclose the subject matter of the present claims.

The present claims relate to a photothermographic material which must satisfy at least one of two specific conditions, Condition I and Condition II. As discussed above, these conditions are as follows:

Condition I:

... the  $\text{NH}_4^+$  content in all the layers formed on the image-forming layer side of the support is  $0.06 \text{ mmol/m}^2$  or less.

Condition II:

... film surface pH of the image-forming layer side of the support is substantially unchanged after coating, and the layers formed on the image-forming layer side of the support do not substantially contain ammonia.

Neither one of Condition I nor Condition II is satisfied in view of the cited combination of references, either expressly or inherently. Further, Applicant requests reconsideration of the previously filed Rule 132 Declarations (which are (1) the Nakano Declaration submitted on November 22, 2002 and (2) the Oikawa Declaration submitted on November 7, 2003 and (3) the Oikawa Declaration submitted on May 11, 2004) as applicable to the present set of claims. Applicants have reviewed the Examiner's comments set forth in paragraph 8 of the Office Action. Applicants respectfully traverse the reference to *Ex parte Steelmand* and *Ex part Gray*, and the assertion that the Declarations are not of enough probative value. As mentioned above, the  $\text{NH}_4^+$  remains in an image-forming layer so long as LACSTAR 3307B is used as a binder of the layer. Neither one of Condition I nor Condition II is satisfied in view of the cited references.

Further, the Declarative Evidence is particularly important as it reveals the lack of inherency of the present subject matter in the cited references. Without such inherent disclosure there can be no anticipation. Applicants note: "The single reference must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons of ordinary skill in the field of the invention." *See Elan Pharmaceuticals Inc. v. Mayo Foundation for Medical Education and Research*, 64 USPQ2d 1292, 1296 (Fed. Cir. 2002) (citing *Crown Operations International, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed. Cir. 2002)). Further, absent inherent disclosure, the lack of any

motivation, such as might be provided by explicit disclosure, to arrive at Condition I or Condition II, prevents a proper *prima facie* case of obviousness from being asserted.

Further, the Examiner's attention is directed to the fact that regardless of the modification of layer surface pH of the samples, the  $\text{NH}_4^+$  content is not affected. Once the  $\text{NH}_4^+$  content has been set by the LACSTAR 3370B binder, the use of compounds such as NaOH or pH buffers may provide different counter anions, but does not alter the actual  $\text{NH}_4^+$  content in the samples. The Examiner is requested to carefully consider this fact in view of the lack of disclosure of Condition I or II.

Also, the Examiner is asked to reconsider this in view of the fact that the present claims require an image-forming layer comprising a polymer latex containing substantially no  $\text{NH}_4^+$ . No photothermographic material falling within the scope of the present claims is either suggested or disclosed by JP '072. There are more specific reasons set forth in Applicant's previous reply dated January 8, 2007.

Further, as mentioned above, a polymer latex such as LACSTAR 3370B is not soluble in a solvent of coating liquid, such as water. Therefore, any  $\text{NH}_4^+$  within the polymer latex cannot be easily removed even if a pH modifier is added to the coating liquid containing LACSTAR 3370B. Without such additional modification, the  $\text{NH}_4^+$  will remain in an image-forming layer for as long as LACSTAR 3307B is used as the binder.

The Examiner has asserted that Samples Nos. 12-14 described in Table 1 in paragraph [0285] of JP '072 were prepared by using NaOH as a pH buffer and their surface pH values were set to 5.2, 6.2 or 6.5. While this may be true, these conditions do not affect  $\text{NH}_4^+$  content requirements of Conditions I or II of the present claims. This also does not affect the added

limitation concerning the substantial lack of  $\text{NH}_4^+$  in the image-forming layer comprising the SBR latex.

Further, Applicant notes the data in the Rule 132 Declarations. Each of Samples 12-14 of JP '072 were prepared using LACSTAR 3370B as a binder. LACSTAR 3370B contains a considerable amount of  $\text{NH}_4^+$  as was demonstrated in the Nakano Declaration submitted on November 22, 2002. Additionally, it was demonstrated in the Oikawa Declaration submitted on November 7, 2003 that the  $\text{NH}_4^+$  content in all of the layers formed on the image-forming sides of the samples, which were prepared using LACSTAR 3370B as a binder, was almost  $0.25 \text{ mmol/m}^2$ . It is therefore evident that the samples described in JP '072 contain  $\text{NH}_4^+$  in an amount much larger than  $0.06 \text{ mmol/m}^2$  as required by Condition I.

Furthermore, if the layer surface pH of a sample prepared according to JP '072 (using LACSTAR 3370B as a binder) is adjusted to 5.2, 6.2 or 6.5, the content of  $\text{NH}_4^+$  does not change. The counter anions for  $\text{NH}_4^+$  may change, but the  $\text{NH}_4^+$  molecules cannot be physically removed from the sample.

The fact that the  $\text{NH}_4^+$  content in a sample prepared using LACSTAR 3370B as a binder is almost  $0.25 \text{ mmol/m}^2$  was also shown in the latest Oikawa Declaration submitted on May 11, 2004. Sample Nos. 7-9, 12-14 and 17-19 of Example 1 of U.S. 6,100,022 were prepared using NaOH or phosphoric acid as a pH buffer and their surface pH values were set to 4.9, 5.5 or 6.2. However, since they were prepared using LACSTAR 3370B as a binder, as proven in the latest Declaration, the  $\text{NH}_4^+$  contents of the samples were almost  $0.25 \text{ mmol/m}^2$ .

Accordingly, as discussed above, it is evident that Sample Nos. 12-14 described in Table 1 at paragraph [0285] of JP '072 contained  $\text{NH}_4^+$  in an amount of almost  $0.25 \text{ mmol/m}^2$ , which is



greater than the amounts required by the claims. Additionally, the Oikawa Declaration demonstrates that samples whose  $\text{NH}_4^+$  contents were almost  $0.25 \text{ mmol/m}^2$  could not reduce the difference in the line widths in the same manner as a composition falling within the scope of independent claim 1.

Accordingly, the cited references of JP '072 and Ito '310 (or combination thereof) fail to achieve the presently claimed subject matter. The references also lack any explicit disclosure of Condition I or Condition II, thus no anticipation exists. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Additionally, there also exists no *prima facie* case of obviousness. Specifically, there exists no motivation in any of the references including the secondary reference of Ito '310 to achieve the presently claimed subject matter. Thus, the Examiner has failed to present a valid *prima facie* case of obviousness.

Even if the Examiner has hypothetically established a *prima facie* case of obviousness, a point not conceded by Applicant, Applicant submits that the presently claimed subject matter achieves unexpectedly superior results compared to the cited art. As stated in M.P.E.P. § 2144.09 (see section entitled "*Prima Facie* Case Rebuttable By Evidence of Superior or Unexpected Results"), any rejection under 35 U.S.C. § 103(a) may be rebutted by a sufficient showing of unexpected results for the present invention.

Here, Applicant notes Table 1 and 2 of the present specification wherein, e.g., the claimed invention shows much lower temperature and humidity dependency than comparative samples that do not satisfy Condition II. Applicant submits that one skilled in the art could not have expected that such excellent effects could be obtained by satisfying Condition II of claimed invention. Applicant further submits that these rejections under § 103(a) are overcome because

evidence of unexpected results is in the present specification and it is improper to not consider such evidence of patentability for the present invention. *See In re Soni*, 54 F.3d 746, 34 U.S.P.Q.2d 1684 (Fed. Cir. 1995) (error not to consider evidence in the specification); M.P.E.P. § 2144.08(II)(B).

Accordingly, Applicant respectfully submits that the Examiner has failed to present a valid case of anticipation or *prima facie* case of obviousness. Further, even if the Examiner has hypothetically presented a *prima facie* case of obviousness, the unexpected results according to the present invention with respect to temperature and humidity dependency, rebut any hypothetical *prima facie* case of obviousness. Accordingly, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

### ***Conclusion***

In view of the above remarks, it is believed that claims are allowable. Favorable action on new claim 31 is also respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig McRobbie, Reg. No. 42,874 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 09/928,339

Art Unit 1752

Preliminary Amendment with Request for Continued Examination

Docket No.: 2870-0171P

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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